

**Sanity from a world of one-to-one chaos:**

**Preparing middle school students**

**for a 1:1 laptop environment**

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Action Research Project  
CI515

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## Introduction

Middle schools are beginning to implement 1:1 initiatives creating environments conducive to higher usage of technology by students and teachers alike (Bebell and O'Dwyer, 2010). While increasing the volume of hardware is creating more use within the buildings, the question one might want to ask is, "What are they doing with this technology to enhance learning?". Is it being used to create higher order thinking skills? Are students being asked to think outside of the normal realms of the classroom? When one uses computers in a 1:1 initiative for the purpose of exploration and knowledge-building, one would hope this could result in positive learning experiences for all learners and instructors involved (Bebell and O'Dwyer, 2010; Mouza, 2008). However, are students prepared to be proficient with the hardware and the programs that come with it? Is the placement of technology in a 1:1 environment an overwhelming task for our schools? With the increasing attractiveness of laptops to students and the likelihood that this technology could peak interest in curriculum for the learning cliental (Mouza, 2008), 1:1 initiatives deserve an opportunity to create a new and exciting world of education in middle schools and beyond.

The intent for this action research project was to explore the need for preparation in support of a 1:1 initiative within a middle school environment, especially the preparation of students for a new pedagogical approach to learning with laptops placed in the hands of every child in the classroom.

This project followed the guidelines established by the Dialectic Action Research Spiral created by Geoffrey Mills (see Figure 1) to provide a "practical guide and illustrate(s) how to proceed with inquiries" (Mills, 2011, p. 17). The process involved choosing an area of focus

which was of interest to me as an educator. This was followed by the collection of data through surveys and interviews. An analysis and interpretation of the data collected gave cause for the development of an action plan with a direct reflection upon the initial area of focus.

In this action research project the following parts are presented: an area of focus statement, research questions, a literature review, the intervention or innovation, membership of the action research group, the negotiations to be undertaken, a timeline of events, the data collection and analysis, interpretations of the findings, and the action plan devised from the whole process. The entire approach to formulating a need and finding supporting data to solve the focus created a valuable tool which will hopefully provide some guidance as you delve into the world of 1:1 laptops. This project was a journey that quite possibly may assist middle schools in making the transition to laptops positive and pain free. As you will see, establishing a focus was just the begging of this expedition.

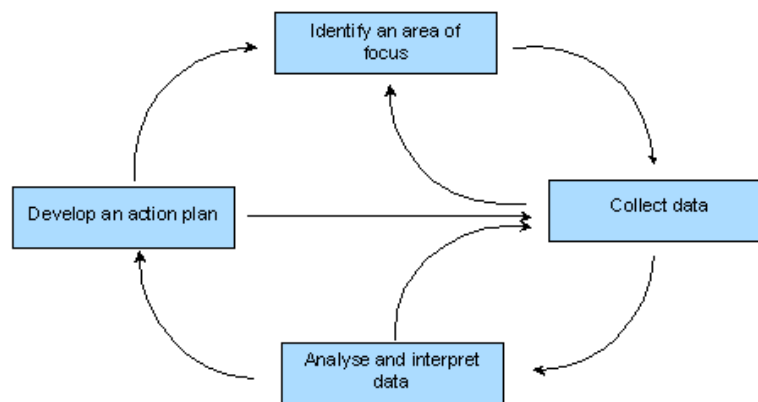


Figure 1. Dialectic Action Research Spiral (Mills, 2011)

## **Area of Focus Statement**

The purpose of this study was to see if sixth grade students were receiving the preparation and knowledge during “Computer Friday” sessions, to provide appropriate technology skills that would assist them during their seventh grade journey into a 1:1 laptop program.

Under the school district’s new 1:1 computer initiative, the seventh and eighth grades received laptops for every student beginning during the 2011-2012 school year. Technology preparation for the students had been limited to one keyboarding/computer teacher for a nine week session. Staff preparation basically took place during periodic professional development meetings. The goal for “Computer Friday” was to provide the sixth graders with enough basic ability so staff members would not have to teach them computer skills; allowing teachers to focus on core content.

## **Research Questions**

- What training needs to be done to prepare educators for a 1:1 environment?
- How do you create a school environment that will allow for constructive and safe learning to take place in a 1:1 environment?
- What motivates the students to want to learn with 1:1 laptops?

## **Review of Related Literature**

Across America, middle school programs are becoming immersed in one-to-one laptop initiatives. This has created both positive and negative results (Bebell & O'Dwyer, 2010). Skeptics see this trend as a nuisance creating an environment conducive to improper activity (Daniel, 2005; Cuban, 2001), while others welcome this movement (Mouza, 2008). Hernandez-Ramos and De La Paz (2009) explain that things, like the removal of textbooks, are changing classrooms as they move away from tradition and embrace technology. To prepare our educational system for the implementation of laptops, certain factors need to be addressed. Only then will we reap the rewards of academic improvement.

Placing laptops in the hands of middle school students does not magically create intelligent children. There are other dynamics involved; better preparation of teachers (Dunleavy, Dextert & Heinecket, 2007), building an environment of acceptance (Donovan, Green and Hartley, 2010; Waters, 2009), and creating learning processes which motivate the students (Li, 2007; Mouza, 2008). This review of literature will highlight these three dynamic topics related to 1:1 laptop initiatives. There are other variables that could be included, such as technical support, types of assessment, and classroom management. These are left out of this overview, so there may be a greater focus on the major tendencies found in the literature. Again, these are teacher preparation, environment, and motivational methods. All three are vital when preparing middle school youth for a 1:1 laptop environment. The three variables mentioned above were chosen after careful evaluation of several academic journals and dissection of information in a matrix suggested by Geoffrey Mills (See Appendix A).

### *Teacher Preparation*

In order to have a successful one-to-one transformation it is important to have educators who are prepared to instruct in this type of environment (Dunleavy et al., 2007). Mouza (2008) identifies that technology use by educators has improved, encouraging that teachers stop feeding information to their students and instead guide their learning through the use of tools provided. Teachers also show a higher proficiency when using computers while organizing lessons and planning their daily agenda. Their confidence and positive outlook towards laptop computers are also heightened (Tenekeci, 2011). Shapley, Sheehan, Maloney, and Caranikas-Walker (2010) found that it was important for the educator to be actively in support of the whole process of technology in the classroom. The students' total experience with computer integration can be influenced by this one simple fact. In order to get educators on-board, there must be a strong support system in place, removing the superfluous distractions like broken computers or misuse of laptops, allowing them to focus on teaching (Dunleavy et al., 2007).

A huge hurdle in the preparation of teachers in a 1:1 teaching environment is the creation of a meaningful and purpose driven professional development plan that assists in providing the knowledge base needed to teach in a room full of laptops (Dunleavy et al., 2007; Mouza, 2008; Shapley et al., 2010). This professional development is best served at least one year in advance of the implementation of a one-to-one initiative, so teachers are better prepared for the change in classroom protocol (Donovan et al., 2010; Shapley et al., 2010). Not every instructor enters this process with the same goals or expertise, so it is important for professional development to be an integral part of everyone's growth and success as leaders in a technology driven school (Dawson, Cavanaugh, & Ritzhaupt, 2006; Mouza, 2008). There are various approaches in how professional

development can take place. Shapley et al. (2010) noted the focus for teacher training in their study was primarily on core teachers because of the school's concern for positive scholastic results. Other districts turned their attentions away from specific educators and directed their focus on pedagogy and the various established approaches toward total immersion and problem-based lessons in the classroom (Bebell & O'Dwyer, 2010; Shapley et al., 2010). Ultimately, teacher preparation was an important step in creating and maintaining a successful one-to-one initiative. Technology use in the classroom tended to reflect positively from confident educators (Tenekeci, 2011). You will see in the next section, being positive, focused, and confident not only reflects positively on teachers; it can also be an added bonus in the learning environment.

### *Learning Environment*

Marshal McLuhan is quoted by Daniel (2005), saying, "Technology environments are not merely passive containers of people but are active processes that reshape people and other technologies alike" (p. 71). This quote is tantamount to someone saying that computers have shaped the way we function in education. McLuhan expressed this fifty years ago; long before the current drive for one-to-one computers in our schools (Daniel, 2005). The initiative to create a learning environment which benefits from the influx of technology must be grounded on three basic directives. First, it needs to be student-centered (Donovan et al., 2010), not focused on the boxes being placed before them. Next, one cannot over look changing poor behaviors and eliminating potential risks (Kite, Gable & Filippelli, 2010). Lastly, focus should be centered on the removal of the classroom walls to provide access to the world (Donovan et al., 2010). These directives bestow focus, providing a good foundation for a positive and productive learning environment.

To nurture a student's learning process; the atmosphere of the school should be one that allows for an individual to guide their own search for knowledge; providing alternative assignments and opportunities (Mouza, 2008). This act of providing a student-centered education is what most learners desire, driving them to be motivated within the school environment where instructors facilitate rather than dictate (Donovan et al., 2010; Mouza, 2008). Placing laptops in schools has been shown to create a greater sense of responsibility, linking this to increased motivation as students are given greater freedom to explore and discover more possibilities via social networks and higher academic pursuits (DeGennaro, 2008; Mouza, 2008). When students and their quest for knowledge are the center of the educational world, rather than laptops and all of the possible technological glitches that come with them, possibilities may be revealed in both teaching and learning that could provide knowledge beyond our wildest dreams and expectations (Bebell and O'Dwyer, 2010; Dunleavy et al., 2007; Li, 2007;).

When writing about the learning environment, one cannot avoid the inclusion of the ever-present problem of poor behavior choices and potential third-party risk factors (Donovan et al., 2010; Kite et al., 2010). While teachers desire the best experience for their students as they explore the online world of social networks and other real world conditions, they should prepare their classes for the possibility of someone making poor choices or doing bad things. Proactive instructors provide advice and directives to assist students in avoiding potential risks before an occurrence takes place (Bebell & O'Dwyer, 2010). If an instructor does not believe the 1:1 laptop initiative is going to be successful, this could be a detriment to a successful experience for that teacher as well as the students (Li, 2007). A positive environment could be the catalyst resulting in a positive experience for everyone.



The walls of a typical classroom are becoming barriers that technology is slowly tearing down. Educators have begun to realize, for students to become engaged in greater exposure to the world around them, the boundary of the classroom walls must be expanded (Donovan et al., 2010). The emergence of the laptop means students are no longer limited to computer usage just in school. Delen & Bulut (2011) found a strong link to higher performance in science, technology, engineering, and mathematics (STEM) courses because of the increased usage of computers at home and in the classroom. Waters (2009) stated that educators are also beginning to look beyond the typical school day, and envision a twenty-four hour window of opportunity for educating. Students with laptops are now capable of completing multitudes of applications at any time of the day. When learners are captivated by assignments that are of interest to them on their time schedule, they tend to achieve better results (Shapley et al., 2010). This motivation, as you will read next, may be created in more than one way to achieve a positive learning experience.

### *Creating a Motivational Learning Process*

For a learning process to be motivational, one must look to the various learning styles of the students being guided (Reynold & Caperton, 2011). Considering the aspect of a positive environment that is all encompassing, bringing in the community as well as the families with direct and indirect ties to the classroom is also very important (MacBride & Luehmann, 2008; Mouza, 2008). Finally, it is essential to be aware of the various uses the computer and Internet bring to a classroom and how they can motivate learners as they utilize them for various explorations (Bebell & O'Dwyer, 2010; Mouza, 2008).

There are many learning styles applied in the classroom. The appropriate pedagogical methods used are still for the instructor to decide. According to Shapley (2010), the teacher is the person who must design a technologically sound plan that will encourage students to explore within each unit of study. One example of learning style that could motivate students would be authentic activities where learners could gain knowledge through discovery as they explore using problem based learning (DeGennaro, 2008; Liu, Horton, Olmanson and Toprac, 2011; Waters, 2009). Another approach to creating a classroom of motivated learners is the process of constructivist learning. This allows students to be the creator of artifacts via the technology available, providing a “meaningful assessment of their learning” (Hernandez-Ramos and De La Paz, 2009, p.153). Constructivist learning has also been utilized in the implementation of various computer programs, and other technological advances (Odom, Marszalek, Stoddard and Wrobel, 2011; Reynolds and Caperton, 2011).

Imagine a bustling room where children are busy exchanging ideas and suggestions regarding how they might solve a hypothetical question. This entirely taking place as they excitedly work in groups, on laptops, while collaborating as a small community. Laptops have brought a new level of interaction and excitement to the classroom (Bebell and O’Dwyer, 2010; Li, 2007; Liu et al., 2007; Mouza, 2008;). The positive reaction towards the evolution of the laptop in the classroom has been embraced by both girls and boys (Odom et al., 2011). With the emergence of the laptop, homework has taken on a whole new aspect in a child’s outlook on assignment management. Students share they prefer typing on a laptop to writing assignments

on paper (Mouza, 2008). Delen and Bulut (2011) also note that youth find it fun to have a home computer and this fact directly correlates to increased math scores.

Students improving various skills while utilizing a laptop at home is reported to be a reoccurring trend (Mouza, 2008). Family also indirectly benefits positively from having a child bring a laptop home. The student becomes an aficionado on the computer, having family look to them for technological assistance (Mouza, 2008). These interactions nurture a positive outlook towards school and learning, causing some students to include computers as a part of their everyday life; feeling comfortable about technology and how it impacts their lives (DeGennaro, 2008; Moos and Honkomp, 2011).

One of the most controversial learning styles is probably the use of computer games in the classroom (Petkov & Rogers, 2011). This may be a concern for some educators, yet we need to seriously explore this gaming phenomenon. Students of all ages are gaming and controlling some type of technology outside of the perimeters of homework (Moos & Honkomp, 2011; Mouza, 2008). Petkov and Rogers (2011) suggest that a way to create a reliable instructional game is to devise one that works hand-in-hand with conventional learning in education. This would provide students with a gaming program that is challenging, yet pedagogically sound for the classroom. Of the top five things students say they like doing on computers, the number one response involves the creation of games (Reynolds & Caperton, 2011). While youth of all ages are busy learning as they engage in computer games, why is education so slow in grasping the concept of gaming to enhance a student's knowledge base (Daniel, 2005)?

How computers are utilized during the educational process may be a very positive experience adding to the information being shared in the classroom (Daniel, 2005; Dawson et al.,

2006; Delen and Bulut, 2011; Odom et al., 2011). Bebell and O'Dwyer (2010) report that tools being used in schools have changed, and will continue to change, at a rapid pace. Technology of the past is now obsolete (Daniel, 2005; Donovan et al., 2010). Educators need to keep up with this change or risk falling behind in a very technological world (Donovan et al., 2010; Shapley et al., 2010). Along with this rapid growth in technology, the usage of the Internet has grown within the classroom, and in the home (Dunleavy et al., 2007). Hernandez-Ramos and De La Paz (2009) share that students tend to retain information much longer when they have worked with others over the Internet. The use of web-based environments was noted to be successful when students were watched while investigating various on-line search engines (Dunleavy et al., 2007). Both the rapid growth of the computer and the faster, more reliable Internet are truly an amazing part of the modern education. When they are combined they create a powerful and motivational learning tool (Li, 2007).

### *Summary*

While creating a 1:1 initiative in a middle school is not an easy task, preparing for this change may, at best, create the ground work for a highly successful program. There have been many accomplishments over the past few years, where schools have envisioned a future in technology and made it a reality. Educators must be ready to meet the needs of students as they prepare for the 21<sup>st</sup> Century. The importance of preparing teachers to teach with technology *before* the students are presented with laptops can be a positive motivator for everyone involved. It removes the potential for negative undertones and allows the focus to remain on the content being taught. Also, understanding what drives students while utilizing technology in the classroom develops intrinsic motivation. Research shows that students are excited to use their

laptops to discover and create (DeGennaro, 2008; Mouza, 2008). This means that teachers must become facilitators rather than dictators of the curriculum. We need to fan the flames of curiosity rather than squelch them with boring rhetoric and drill and practice techniques. Properly preparing middle school learners and educators to take creative, constructive approaches, while utilizing 1:1 laptops, would challenge them to reach beyond the walls of the classroom. Utilizing these suggestions would introduce the process of posing new questions and finding new answers, yet bring some sanity to a potential world of laptop chaos.

The following study was conducted to provide insight into the preparation of students for the implementation of 1:1 laptops. The research and findings were intended to provide data and reflection providing for a smooth transition from 6<sup>th</sup> grade portable computer labs to the placement of a laptop in every child's hands.

### **Intervention/Innovation**

The idea behind this research project was to gather information from the seventh and eighth grade students to comprehend what was successful or unsuccessful in their preparations for a 1:1 implementation of laptops for every student in their respective grades. The desired outcome was to identify if there was a need for a tool or program to prepare students before they began their 1:1 journey. Perhaps to sharpen the existing sixth grade course called Computer Friday, or create something completely different. To accomplish this, the students who earlier in the school year obtained laptops for their studies became a part of the study.

## **Membership of the Action Research Group**

This research project enlisted the assistance of the seventh and eighth grade students from a Midwestern middle school. A 1:1 initiative placing laptops in the hands of every student in these grades had just taken place (See Appendix B). According to information garnered from a recently published 2012 distribution of student demographics (See Appendix C), the current status report for this school showed a student population for the seventh grade of 97 students and for the eighth grade, 107 students. 92% of the students were White or Caucasian. Almost half of them came from a low socioeconomic status (SES) with the target population receiving 53% free or reduced lunch. The information provided also shared that 52% of the focus group were male compared to 48% who were female. Prior to the implementation of laptops, the school had three computer carts with 24 laptops in each, which were shared between three grade levels. There was also one computer lab which could be reserved by instructors as needed. Every teacher was provided with a personal laptop during the two years prior to the 1:1 implementation. Gaining information about the student population was just the beginning. Getting permission and laying the groundwork for the actual retrieval of data was also a painless procedure.

## **Negotiations to Be Undertaken**

Before attempting to gather information, the building principal was asked for permission to conduct this study. Since this researcher was a member of his staff, verbal communication was all the school required for approval to continue. This took the place of a formal letter of request, which normally would have been required before commencing with the study. The students

were given a letter to take home to their parents explaining the project and how everything was voluntary (See Appendix D). Rather than request a signature, students were offered the option to not take the survey without a signing a release. This was done to maintain anonymity for everyone involved.

### **Timeline**

|             |                     |   |
|-------------|---------------------|---|
| Phase One   | January - March     | Identify area of focus, review related literature, develop research questions, write draft of literature review         |
| Phase Two   | March 9 – April 6   | Collect & analyze data, work on other parts of AR plan: Introduction, intervention/innovation, membership, negotiations |
| Phase Three | April 6 – April 20  | Continue analyzing data, revising literature review, writing findings (interpreting the findings)                       |
| Phase Four  | April 21 – April 28 | Action planning, complete AR project and presentation, share results with stakeholders.                                 |

### **Data Collection and Analysis**

#### *Data Collection*

The data were collected using two methods, an online survey and a face-to-face interview. Both processes were fairly simple; however the subjects were slow to respond.

The survey was written utilizing Google Forms (See Appendix E). Students were then presented questions via a Uniform Resource Locator (URL), or web address, provided in one classroom for each grade level. Two student teachers were chosen to assist in relaying this information to the students, even though the grade level instructors would most likely have assisted with this minor detail. If they opted to take the survey, students were directed to proceed to the web site to answer the questions to the best of their ability.

The second data gathering method was with face-to-face interviews (See Figure 2). Five students were chosen randomly from each grade level. The scientific random selection process was made by dropping a pencil eraser with an arrow drawn on one end, five times onto a roster listing all of the seventh graders. The selected children's names were the ones touched by the eraser's arrow each time. This same attention to detail in the selection process was given to the eighth grade list. Each student chosen was allowed the opportunity to opt out of the session. All students agreed to take part. The interview sessions took place before and after school to avoid having anyone miss classes. A digital recorder was used during the interviews to make sure responses could be cross referenced for accuracy.

The inquiries were based from a set of question guidelines designed to build confidence and openness in the interview process called the ORID method (See Appendix F). This format was developed by the Institute of Cultural Affairs (ICA) originally to be utilized for group discussions (Nelson, 2001). I felt this would be a unique way to bring substance and creative answers to each interview.

After gathering information, the data needed to be analyzed. The next section describes how this was done.



### *Data Analysis*

The data gathered was organized and easy to follow. The survey consisted of sixteen questions which were broken down by the following categories:

- Students were asked to rate their ability to use a computer, and if the use of a computer had helped them in school.
- They were asked about joys and concerns with having a laptop in school.
- Which programs did they use the most at home and at school?
- What programs did they wish they had learned before getting laptops?
- Were they ever harassed or bullied on the computer and to provide possible solutions?

Students were also asked if they were a boy or girl, their grade, age, and if they owned a computer at home. This set of questions was open to everyone with the added promise of complete anonymity. The resulting spread sheet provided an overview of everyone's answers and allowed for the manipulation of rows and data (See Appendix G).

The survey questions also were fairly easy to analyze due to the simple format (See Figure 2). Each student's answer was compared with the others for any major changes or commonalities (See Appendix H). The data from both processes made for interesting discovery and reflection in the Findings section.

## **Short Questionnaire for Face-To-Face Interviews with students**

(These following questions are based from the ORID system of inquiry)

|  |                    |
|--|--------------------|
| What do you like the most about having a laptop to use in school?  | Interview response |
| How have laptops helped you become a better student?   | Interview response |
| How are you using your laptop at school?   | Interview response |
| If you could go back in time, what would you have done differently to become more prepared to use a laptop computer in school? | Interview response |
| Any additional thoughts  | Interview response |

Figure 2. Face-to-face interview questions

## **Findings**

After gathering information from the surveys and face-to-face interviews some things worthy of note stood out from the data. From responses about the amount of computer usage to the way students looked to the laptop as something that could assist them in learning, the statistics were fascinating. The survey graphs were combined as well as split by grade, allowing for a comparison of both grades; seventh and eighth. The face-to-face interviews provided a little more personal and in depth point-of-view with candid responses from the students.

### *Online Survey*

The first two questions asked about student computer usage. Initially, the frequency of computer use was in question. Both grades of students indicated 70% of the time they used a computer eleven to more than twenty times per week (See Figure 3). This indicated that the

study group's usage of laptops was very high, especially for a school district in a high socioeconomic demographic area.

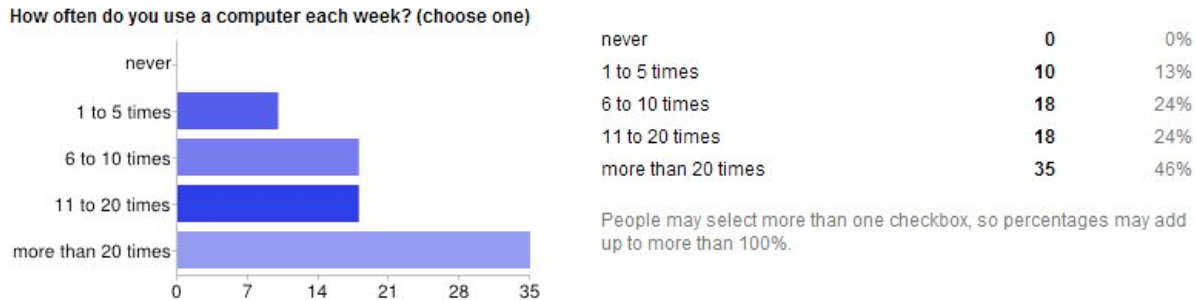


Figure 3. Computer usage per week

Overall, students shared they were only slightly confident that laptop usage had helped them become better students. 41% of the respondents felt their personal ability was high or nearly at the highest point (See Figure 4). This could have been an indicator that there needed to be a greater emphasis on teaching and classroom content, relying on laptop technology as a tool to assist rather than to drive the learning (Shapley et al. 2010).

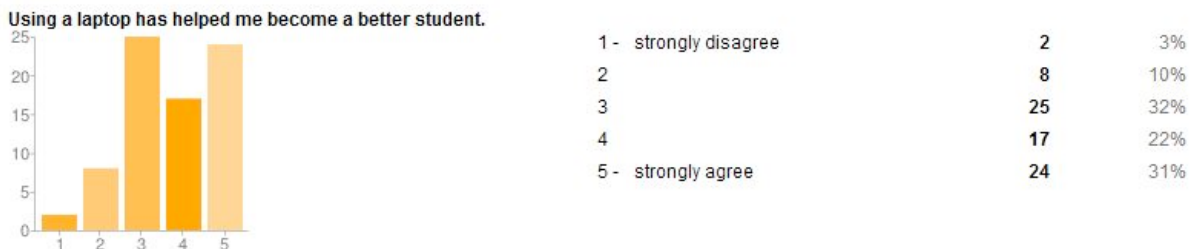


Figure 4. Combined personal computer ability

### *A Sifting of Data*

When data was sifted into grade levels, a large discrepancy came to light. Looking again at the student usage, far more of a percentage of seventh grade students surveyed used their computer at least more than twenty times per week compared to the percentage of eighth grade

students (See Figures 5 and 6). This possibly could have been a result of no Computer Friday sessions for the eighth graders in during their sixth grade year? There was a 31% difference between the two grades.

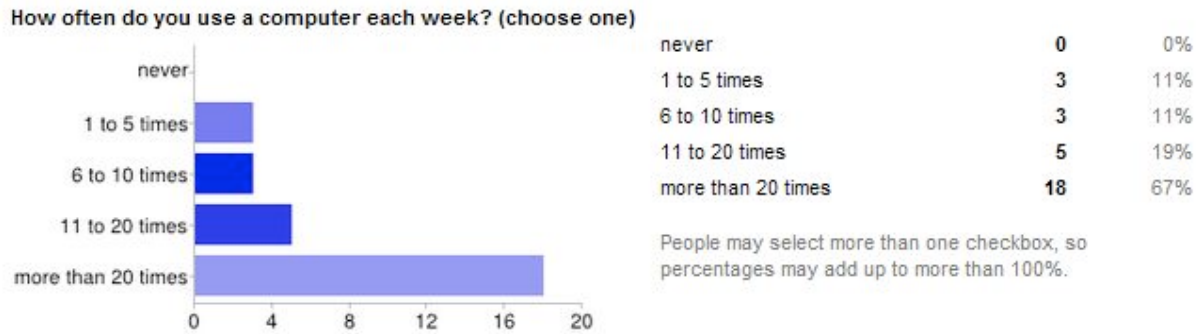


Figure 5. Seventh grade computer usage per week

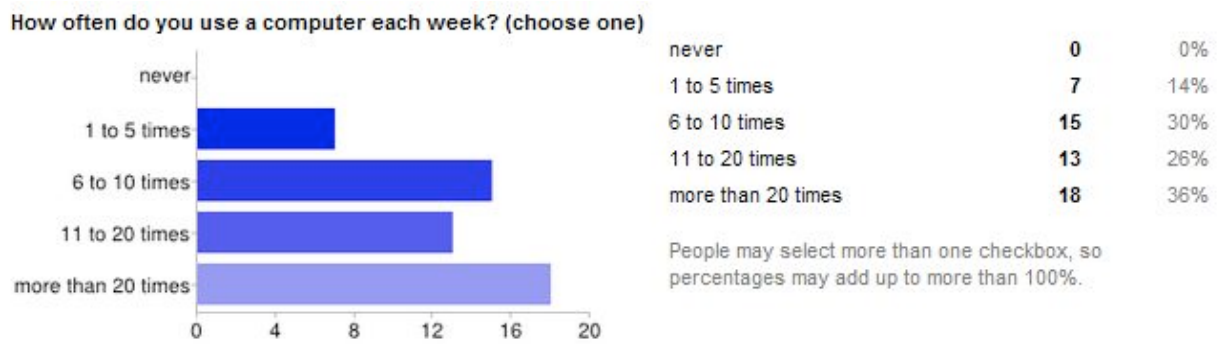


Figure 6. Eighth grade computer usage per week

Another curious piece of information compared both grades in regards to the earlier question about how using the laptop assisted in making them better students. While the seventh grade responded at 56% (See Figure 7), the eighth grade reaction was a low 10% (See Figure 8). This might be attributed again to the need for even more intensive staff training and readiness for the 1:1 placements. It also could point to the student preparation during sixth grade, linking their positive motivation to succeed to previous training during Computer Friday sessions.

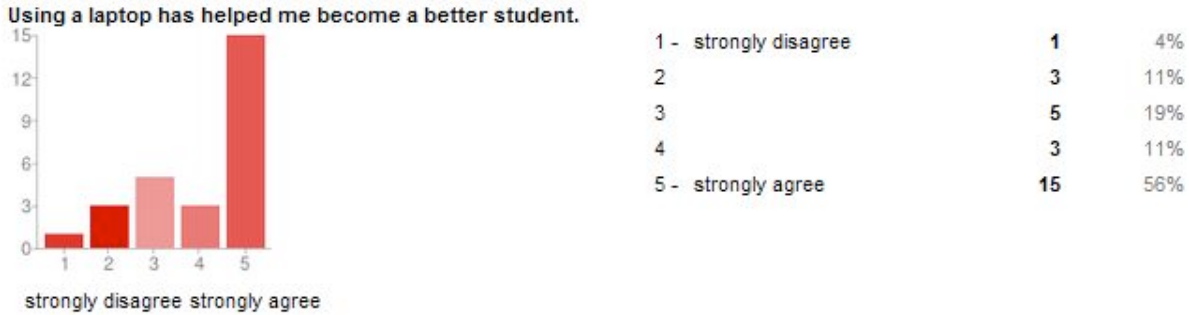


Figure 7. Seventh grade laptop/better student

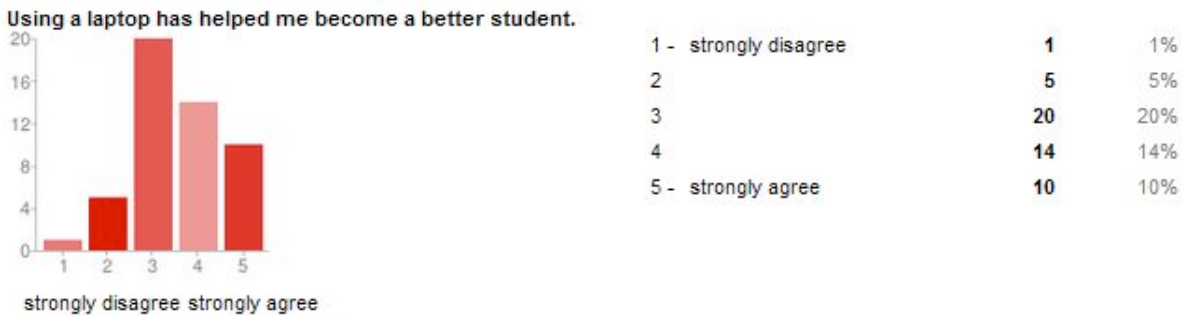


Figure 8. Eighth grade laptop/better student

### *Safety online*

A final piece of information garnered from the survey data dealt with students' perception of bullying in the school. Subjects were asked if they felt they were harassed or bullied on the computer. The combined classes responded that 93% felt they were not threatened by either bullying or harassment (See Figure 9). This could be attributed to almost anything in the building; however there was a positive behavior training session conducted before laptops were given to each student.

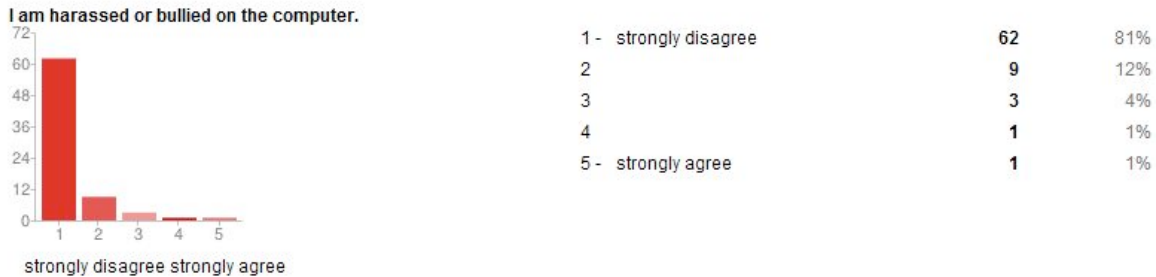


Figure 9. Combined feelings about bullying on the computer

While students were taking the survey, the interview process provided a different, more intimate, opportunity to hear from them.

### *The Face-To-Face Interview*

As mentioned earlier, there was a random sampling of each grade level. Ten students were selected to be interviewed (See Appendix H). The most unusual discovery from the interview was how the seventh grade participants were quick to note specific programs and web sites in their answers.

7-3: The Gizmos have helped me understand science a lot more... I use my email, Microsoft products, gizmos, and the teacher's blogs for the most part

7-4: I get to use PowerPoint and other presentation websites.

7-5: Edmodo, email, and searching for information for keyboarding. I also like Wordle and Livebinder.

In question one, the students were asked, "What do you like the most about having a laptop to use in school?" Several of the subjects indicated how they enjoyed typing their assignments rather than handwriting. This was observed earlier in the literature review where it was noted "(w)ith the emergence of the laptop, homework has taken on a whole new aspect in a child's outlook on assignment management. Students share they prefer typing on a laptop to writing assignments on paper (Mouza, 2008)." The responses sharing this were as follows:

7-2: I'm able to use it at home and I can get stuff done faster. No handwriting.

7-3: Most of my homework is on the computer which is nice to have it all together.

7-5: We don't waste paper and it's kind of easier to bring your computer home than a bunch of books.

8-4: You are able to do homework fast and you can study a whole lot easier and you have like, all the information you need to do projects or something.

The subjects' reflections about enjoying completing their homework and assignments on their laptop possibly could be seen as reinforcing positive motivation.

When asked if they would have done anything differently in their preparation to use a laptop computer, the seventh graders either answered with "no" or "nothing", while one felt that he or she was, "pretty prepared for the beginning of the year."

In contrary, the eighth grade subjects answered the same question pining for a different approach in their computer training.

8-1: I would have participated in the Computer Friday things.

8-3: Learn more about the sites we use. Other than that everything went fine.

8-4: I would have tried to get myself more familiar with Word and PowerPoint and things like that.

8-5: I would have took the computer classes that you gave and could have been better.

The interview subjects seemed to be very open with their responses. Their answers to question four appeared to indicate they wanted to have the opportunity to take part in some type of computer training session during the year prior to receiving a laptop in a 1:1 initiative.

With all of the findings, creating a plan of action was the next logical step.

## Action Plan

From the data, it was quite possible that the Computer Friday sessions were helping to make the 1:1 transference smooth. With students in the 7<sup>th</sup> grade feeling more comfortable using their laptops and 8<sup>th</sup> grade students requesting more training, it would seem this was the case.

Based on what I learned from this investigation, the next plan of action might be to inquire into what programs or computer training the upper grade instructors would like to see being taught to the sixth graders, thus preparing them for 1:1 laptops in the seventh grade.

I could see there was much to sharpen with regards to finding answers to the three questions posed at the beginning of this project. First, I did not find an answer to the training needs for teacher preparation. A flaw in the research was not including the staff in the interviews and survey. This would have possibly assisted in identifying the needs of the teachers.

Regrettably there were time constraints which did not allow for the aforementioned questioning to take place. Perhaps a follow up to this project would be to obtain the staff's opinion? Their input would have been a valuable piece to this puzzle. Were the results showing large gaps between the seventh and eighth grade students and their computer comfort levels indirectly related to the programs being implemented in the school? Would more intensive training of teachers improve how students feel about laptops helping during their studies?



An anonymous person once noted, “You can lead a horse to water, but you cannot make it drink. This could be restated as, “You can give a kid a computer, but you cannot make him think.”

I bring up this point because of the survey results from Figures 6 and 8, where the eighth grade students shared they don’t use their laptop very much, and they don’t feel it assists in making them a better student. Perhaps professional development having even more emphasis in the training and implementation on the usage of laptops while teaching would assist in “making him think?” Sharing these findings with the school’s planning committee might provide some insight to the students’ point of view.

The final question asked about creating a constructive and safe learning zone in a 1:1 environment. The majority of the students surveyed shared they didn’t see this as a problem. As noted earlier, positive behavior training sessions conducted before laptops were given to each student most likely were the catalyst to this result.

One thing is for sure, Mills Dialectic Action Research Spiral held true to form. There will most likely be the collection of more data, so the above action plan may continue to be sharpened into another area of focus; constantly pursuing that moment when sanity moves from a world of 1:1 chaos.

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## Appendix A

| Variables Considered in the Study              |      |                    |              |                          |                              |   |                  |                          |               |                   |            |                     |             |                          |                          |   |         |                   |
|--|------|--------------------|--------------|--------------------------|------------------------------|---|------------------|--------------------------|---------------|-------------------|------------|---------------------|-------------|--------------------------|--------------------------|---|---------|-------------------|
| Author/s                                       | year | 1-1                | success      | chang<br>g               | usings<br>g                  | usings<br>st.                                 | computer<br>goal | Teacher<br>learning      | Tech<br>setup | environment       | challenges | Classroom<br>setup  | assessments | Learning<br>Process      | motivation               | Technology<br>21 <sup>st</sup> century<br>goals | Impact  | Conclude<br>Topic |
| Donovan, L., Green, T., & Hartley, K.          | 2010 | *424               | *            | *425                     | *432<br>*435<br>*431<br>*437 | *425<br>*431<br>*435                          | *427             | *427                     | *427          | *434<br>*438      |            |                     |             |                          |                          |   |         |                   |
| Dunleavy, M., Dextert, S., & Heinsohn, W.F.    | 2007 | 440<br>451         |              |                          | 441<br>445<br>446<br>447     | 444<br>445<br>446<br>450                      |                  | 441<br>450               | 451           | 442<br>450<br>451 | 442<br>449 | 449<br>450<br>450x2 | 449         |                          |                          |   |         |                   |
| Hernandez-Ramos, P., & De La Paz, S.           | 2009 |                    | *167<br>*168 | *157                     |                              | *153<br>*169                                  |                  |                          |               |                   |            |                     |             |                          |                          |   |         |                   |
| Dawson, K., Cavanaugh, C., & Ritzhaupt, A.     | 2006 |                    | *145<br>*154 |                          |                              | *155  |                  | *145                     |               |                   |            |                     | *154        |                          |                          |   |         |                   |
| Mouza, C.                                      | 2008 | 450<br>469         | 449          | 448<br>449<br>461<br>463 | 458<br>462<br>464<br>467     | 449<br>450<br>460<br>463<br>464<br>465<br>467 | 447              | 450<br>451<br>464<br>468 |               | 449               |            | 456<br>457          |             | 462<br>463<br>466<br>468 | 463<br>464<br>466<br>468 | 469   |         |                   |
| DeGennaro, D.                                  | 2008 |                    |              |                          |                              | 1<br>2  |                  |                          |               | 2                 |            |                     |             | 17                       | 10                       | 3<br>14   |         |                   |
| Bebell, D. & O'Dwyer, L.                       | 2010 | 5<br>6<br>11<br>12 |              | 11                       |                              | 7<br>11                                       |                  | 9                        |               | 8<br>10<br>12     |            | 8                   | 7           |                          |                          |   |         |                   |
| Delen, E. & Bulut, O.                          | 2011 |                    |              |                          |                              | 311<br>312                                    |                  |                          |               | 315<br>316        | 311        |                     |             |                          |                          |   | 311     |                   |
| Tenekeci, E.                                   | 2011 |                    |              |                          |                              |   |                  | 300<br>302<br>303        | 303           | 300               |            |                     |             |                          |                          |   |         |                   |
| Petkov, M. & Rogers, G.                        | 2011 |                    |              |                          |                              |   |                  |                          |               |                   | 11         |                     |             | 12                       | 9<br>11                  |   | 9<br>10 |                   |
| Waters, J.                                     | 2009 | 35                 |              |                          |                              | 36  |                  |                          | 39            | 36<br>39          | 38         |                     |             |                          |                          | 39  |         | 35                |
| Li, Q.   | 2007 |                    | 366<br>369   | 379<br>389               | 380<br>388<br>389            | 379<br>380<br>383<br>386                      | 379              | 391                      |               | 378<br>390        | 379        |                     |             | 383<br>388               | 380<br>382<br>387<br>389 | 386<br>391<br>392                               |         |                   |
| Liu, M., Horton, L., Olaniran, J., & Iqbal, P. | 2011 |                    |              |                          |                              | 257<br>260                                    |                  |                          |               |                   |            |                     | 260         | 251<br>260               | 249<br>250<br>260<br>262 | 250<br>261<br>262                               |         |                   |


| Author/s  |      | Variables Considered in the Study |          |                   |                |                              |            |                            |                     |               |             |            |                    |                   |                          |            |   |       |
|---|------|-----------------------------------|----------|-------------------|----------------|------------------------------|------------|----------------------------|---------------------|---------------|-------------|------------|--------------------|-------------------|--------------------------|------------|---|-------|
|   |      | year                              | 1.1      | success           | chang<br>g     | usage<br>s                   | usage<br>s | computer<br>goal           | teacher<br>training | tech<br>setup | environment | challenges | classroom<br>usage | assignments       | learning<br>process      | motivation | technology<br>21 <sup>st</sup> century<br>goals | gamma |
| Moos, D. & Honkomp,<br>B.   | 2011 |                                   |          |                   |                | 243<br>244                   |            |                            |                     |               | 246         |            | 238                | 234               | 231<br>234<br>243<br>246 | 232<br>233 | 244   |       |
|   | 2005 |                                   |          |                   |                | 71                           |            |                            |                     | 71            | 71<br>72    | 71         |                    |                   |                          | 71         | 71  |       |
| Kite, S., Gable, R.,<br>& Filippelli, L.                                  | 2010 |                                   |          |                   |                |                              |            |                            |                     | 162           | 158         |            |                    |                   |                          |            |   |       |
| MacBride, R. &<br>Luehmann, A.  | 2008 |                                   |          |                   |                | 173<br>175<br>179            |            | 162                        |                     |               |             |            |                    | 173               |                          | 180<br>181 |   |       |
| Odum, A.,<br>Marszalek, J.,<br>Stoddard, E., &<br>Wrobel, J.              | 2011 |                                   |          |                   |                | 2352<br>2354<br>2369<br>2371 |            |                            |                     |               |             | 2354       |                    |                   |                          |            |   |       |
| Reynolds, R. &<br>Caperton, I.  | 2011 |                                   |          | 280<br>285        |                | 268<br>270<br>276            |            | 278                        |                     |               | 287         |            |                    | 270<br>271<br>272 | 276                      |            |   |       |
| Ben-David<br>Kolikant, Y.   | 2009 |                                   |          | 131<br>132<br>133 |                |                              |            | 183                        |                     |               |             |            |                    |                   |                          |            |   |       |
| Seet, L. & Quek, C.   | 2010 |                                   |          |                   |                |                              |            |                            |                     |               |             |            |                    | 174<br>175        |                          | 182        |   |       |
| Shapley, K.,<br>Sheehan, D.,<br>Maloney, C., &<br>Caranikas-Walker,<br>F. | 2010 | 10<br>25<br>33<br>43              | 25<br>44 |                   | 29<br>47<br>50 | 28<br>29<br>43               | 8-9        | 10<br>11<br>24<br>25<br>44 | 43                  |               |             |            |                    | 27                | 24<br>49                 |            |   |       |
|   | 15   | 8                                 | 13       | 19                | 45             | 4                            | 23         | 7                          | 20                  | 10            | 10          | 5          | 16                 | 23                | 13                       | 8          | 1   |       |

## Appendix B



## REGULAR BOARD MEETING MINUTES

6:00 P.M.


 District Office Boardroom  
May 9, 2011

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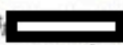
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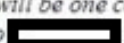
11-26

The Administration recommends approval of the proposal for a 1:1 Student Laptop Initiative as presented by the District Technology Committee at the April 25, 2011, Board Workshop.

*"The  Community School District Technology Committee brings forth the following 1:1 Initiative Proposal for the School Board's consideration:*

*We recommend that the  School District supports a 1:1 Initiative for students.*

*In 2011-2012 each  Middle School 7<sup>th</sup> and 8<sup>th</sup> grade student would be issued a laptop to provide a 1:1 technology environment to support 21<sup>st</sup> Century Learning Skills. This proposal includes the purchase of 200 laptops. The expected life of a laptop is 4 years. The laptops will stay within the 7<sup>th</sup> and 8<sup>th</sup> grades for four years. The computers will be turned in each spring and reissued to a 7<sup>th</sup> or 8<sup>th</sup> grader in the fall. These computers will not move up with the students to the High School. This will allow for computers to be set up best to support the Middle School curriculum needs. These computers will be issued to students for the 24/7 availability.*

*In 2011-12 each  Middle School 6<sup>th</sup> grader student will have a 2:1 access to computers. That means for every 2 students there will be one computer available for student learning. In 2012-13, when the 5<sup>th</sup> graders move to  the 2:1 ratio will be in place for 5<sup>th</sup> and 6<sup>th</sup> graders. This ratio can be met by using a combination of current desktops and laptops. These computers will be for in school use only.*

*In 2012-13 each High School student grades 9 through 12 will be issued a laptop. These laptops are expected to last for 4 years. They will be issued to a High School student in the fall, turned in each spring and reissued in the fall. This will allow for computers to be set up to best support the High School curriculum needs. These computers will be issued to students for the 24/7 availability."*

The budget to support the 1:1 Initiative, as presented at the Board Workshop, is included as part of this exhibit. Multiple funding sources will be used: PPEL (Physical Plant and Equipment Levy), ISL (Instructional Support Levy), Management Levy, and the General Fund.



## Appendix C

## Distribution of Student Demographic Information

|                 | -2 | -1 | 0  | 1  | 2  | 3  | 4  | 6  | 8  | 7  | 9   | 10  | 11  | 12 | TOTAL |
|-----------------|----|----|----|----|----|----|----|----|----|----|-----|-----|-----|----|-------|
| Gender F        | 19 | 15 | 37 | 52 | 41 | 35 | 48 | 46 | 42 | 44 | 62  | 48  | 56  | 43 | 642   |
| Gender M        | 9  | 17 | 47 | 43 | 42 | 49 | 53 | 49 | 51 | 53 | 71  | 65  | 50  | 59 | 712   |
| Free/Reduced P  | 27 | 25 | 35 | 39 | 35 | 34 | 45 | 44 | 37 | 39 | 65  | 47  | 59  | 50 | 551   |
| Free/Reduced F  | 1  | 7  | 39 | 41 | 40 | 42 | 46 | 34 | 46 | 42 | 45  | 48  | 37  | 35 | 537   |
| Free/Reduced R  | 0  | 0  | 9  | 15 | 7  | 8  | 10 | 17 | 10 | 16 | 22  | 18  | 10  | 7  | 165   |
| Free/Reduced    | 0  | 0  | 0  | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 0   | 0   | 0   | 0  | 1     |
| IEP 0           | 5  | 10 | 61 | 82 | 65 | 64 | 73 | 71 | 50 | 41 | 49  | 49  | 38  | 45 | 749   |
| IEP 1           | 3  | 3  | 11 | 13 | 16 | 17 | 24 | 24 | 12 | 14 | 27  | 19  | 22  | 15 | 234   |
| IEP 2           | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0   | 0   | 0   | 0  | 1     |
| IEP <NA>        | 30 | 18 | 12 | 0  | 1  | 4  | 4  | 0  | 31 | 42 | 57  | 45  | 46  | 42 | 370   |
| ELL 0           | 0  | 0  | 0  | 1  | 51 | 55 | 67 | 71 | 72 | 71 | 79  | 0   | 1   | 0  | 479   |
| ELL 1           | 0  | 0  | 4  | 2  | 5  | 3  | 1  | 1  | 2  | 3  | 5   | 1   | 1   | 4  | 33    |
| ELL 4           | 0  | 0  | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 0   | 0   | 1   | 1  | 3     |
| ELL 88          | 12 | 15 | 78 | 89 | 10 | 15 | 35 | 16 | 12 | 17 | 23  | 135 | 110 | 97 | 745   |
| ELL <NA>        | 16 | 17 | 2  | 3  | 5  | 11 | 8  | 7  | 7  | 6  | 5   | 1   | 3   | 0  | 94    |
| ELP/TAG 0       | 8  | 14 | 72 | 95 | 81 | 78 | 93 | 90 | 89 | 92 | 100 | 107 | 99  | 94 | 1237  |
| ELP/TAG 1       | 0  | 0  | 0  | 0  | 1  | 3  | 5  | 5  | 3  | 5  | 7   | 3   | 5   | 5  | 49    |
| ELP/TAG <NA>    | 20 | 18 | 12 | 0  | 1  | 4  | 3  | 0  | 1  | 0  | 1   | 3   | 2   | 3  | 68    |
| Homeless 1      | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 2   | 0   | 2   | 0  | 5     |
| Homeless 2      | 0  | 0  | 3  | 4  | 3  | 2  | 7  | 8  | 0  | 0  | 1   | 5   | 1   | 3  | 37    |
| Homeless 8      | 0  | 0  | 0  | 1  | 0  | 1  | 1  | 0  | 0  | 0  | 0   | 0   | 0   | 0  | 3     |
| Homeless 88     | 6  | 13 | 59 | 90 | 79 | 77 | 87 | 81 | 89 | 97 | 105 | 107 | 102 | 99 | 1219  |
| Homeless <NA>   | 22 | 19 | 21 | 0  | 1  | 5  | 6  | 6  | 4  | 0  | 1   | 3   | 1   | 0  | 90    |
| Ethnicity A     | 0  | 0  | 1  | 1  | 2  | 0  | 1  | 0  | 2  | 1  | 3   | 2   | 2   | 4  | 22    |
| Ethnicity B     | 0  | 0  | 1  | 2  | 4  | 3  | 3  | 3  | 2  | 1  | 3   | 2   | 2   | 2  | 30    |
| Ethnicity H     | 4  | 1  | 5  | 13 | 7  | 5  | 7  | 6  | 8  | 10 | 1   | 8   | 5   | 4  | 89    |
| Ethnicity I     | 2  | 1  | 3  | 1  | 1  | 1  | 0  | 2  | 2  | 0  | 2   | 1   | 0   | 1  | 18    |
| Ethnicity W     | 22 | 30 | 72 | 77 | 69 | 75 | 90 | 84 | 78 | 85 | 99  | 104 | 97  | 91 | 1192  |
| Ethnicity <NA>  | 0  | 0  | 1  | 1  | 0  | 0  | 0  | 0  | 1  | 0  | 0   | 0   | 0   | 0  | 3     |
| Enrollment 1    | 28 | 32 | 75 | 78 | 69 | 72 | 73 | 80 | 76 | 85 | 108 | 89  | 85  | 86 | 1120  |
| Enrollment 11   | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0   | 1   | 0   | 0  | 1     |
| Enrollment 2    | 0  | 0  | 9  | 17 | 14 | 13 | 28 | 15 | 17 | 11 | 23  | 21  | 21  | 15 | 227   |
| Enrollment 8    | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1   | 0   | 0   | 0  | 3     |
| Enrollment <NA> | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1   | 2   | 0   | 0  | 3     |

**F - female**  
**M - male**

**P - paid**  
**F - free**  
**R - reduced**

**0 - no / not in program**  
**1 - yes /in program**  
**3 - transitioned**  
**<NA> no data entered**

**Enrollment Status**  
**1 - enrolled / resident**  
**2 - open enrolled / in**  
**6 - home school / CPI dual enrolled**

**Homeless**  
**1 - Sheltered/Transitionally Housed**  
**2 - Doubled-up**  
**3 - Unsheltered**  
**6 - Hotel/Motel**



## Appendix D

Dear Students and Parents,

With 1:1 laptops being implemented in our school, it is important that we understand what is working and what needs to be tweaked or fixed. I am asking for your help in learning about the thoughts of 7<sup>th</sup> and 8<sup>th</sup> grade students regarding their preparation for laptops and how things have been going during this first year of use. The goal of this research is to learn what changes might need to be made during the Computer Friday sessions currently being taught in the 6<sup>th</sup> grade to better prepare students for laptops next school year. The results will be used as data for an action research paper.

I am asking all 7<sup>th</sup> and 8<sup>th</sup> grade students to please complete the below survey as soon as possible. It should take approximately 10-15 minutes of your time. The survey is located at the following link: <http://tinyurl.com/OneToOneSurvey>.

Your participation in this study is completely voluntary and you may refuse to participate. If you decide to not participate in the study, it will not result in any penalty. You may skip any questions that you do not wish to answer. Additionally, there are no future risks for participating in this study.

Although your taking part in this study is voluntary, it is important that your opinions are included so that I may obtain an accurate understanding. No identifying information will be gathered or kept. The data will be reviewed until the analysis is complete, then the files will be destroyed.

If you have any questions about the survey, please contact Mr. Cline at *(phone # deleted)*. You *may* also email me at [clinedoug@.net](mailto:clinedoug@.net).

Thank you very much for your help.

Sincerely,

Douglas Cline  
6<sup>th</sup> Grade Instructor  
Middle School  
[clinedoug@.net](mailto:clinedoug@.net)

## Appendix E

### 1:1 Laptop Preparation: What works, what should be changed?

With 1:1 laptops being implemented in our school, it is important that we understand what is working and what needs to be tweaked or fixed. I am asking for your help in learning about the thoughts of 7th and 8th grade students regarding their preparation for laptops and how things have been going during this first year of use. The goal of this research is to learn what changes might need to be made during the Computer Friday sessions currently being taught in the 6th grade to better prepare students for laptops next school year.

Answer the following questions to the best of your ability. Your participation in this study is completely voluntary and you may refuse to participate. If you decide to not participate in the study, it will not result in any penalty. You can skip any questions that you do not wish to answer. Additionally, there are no future risks for participating in this study, and your name will remain anonymous.

**How often do you use a computer each week? (choose one)**

- ☐ never
- ☐ 1 to 5 times
- ☐ 6 to 10 times
- ☐ 11 to 20 times
- ☐ more than 20 times

**Do you have a computer that you use outside of school?**

- ☐ yes
- ☐ no

**Did you attend any "Computer Friday" sessions during 6th grade?**

- ☐ yes
- ☐ no
- ☐ I did not attend 6th grade at Woodside

**Are you a girl or a boy?**

☐ girl

☐ boy

**Currently, what grade are you in?**

☐ 7th grade

☐ 8th grade

☐ Other:

**How old are you?**

☐ 11

☐ 12

☐ 13

☐ 14

☐ 15

☐ Other:

**Answer the following statements on a scale of 1 to 5. The scales will vary from lowest to highest and from strongly disagreeing to strongly agreeing.**

**Where do you see your personal ability to use a computer?**

1 2 3 4 5

low ☐ ☐ ☐ ☐ ☐ high

**I use my laptop at school all the time.**

1 2 3 4 5

strongly disagree ☐ ☐ ☐ ☐ ☐ strongly agree

**Using a laptop has helped me become a better student.**

1 2 3 4 5

strongly disagree ☐ ☐ ☐ ☐ ☐ strongly agree

**If you disagreed, what could be done to assist in helping you become more comfortable with the computer?**

**I am harassed or bullied on the computer.**

1 2 3 4 5

strongly disagree ☐ ☐ ☐ ☐ ☐ strongly agree

**If you agreed, what would you suggest be done to stop the harassment or cyber-bullying?**

**Answer the following questions to the best of your ability.**

**What concerns have you had about the use of your laptop computer in your education?**

A large rectangular text box with a thin black border, intended for a student to write their answer. A small double-slash icon is located in the bottom right corner of the box.

**What are the computer programs you use the most in SCHOOL?**

A large rectangular text box with a thin black border, intended for a student to write their answer. A small double-slash icon is located in the bottom right corner of the box.

**What are the computer programs you use the most at HOME?**

A large rectangular text box with a thin black border, intended for a student to write their answer. A small double-slash icon is located in the bottom right corner of the box.

**What are the computer programs you wish you had learned about before getting your 1:1 laptop? Why?**

**Are there any computer programs to which you wish you have been exposed during 6th grade, specifically during Computer Friday sessions?**

**Thank you for taking the time to complete this survey. I appreciate your help!**





- Mr. Cline

Submit

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## Appendix F

|          |                     |   |                  |  |
|----------|---------------------|---|------------------|--|
| <b>O</b> | <b>Objective</b>    | <p>SENSES<br/>See, Hear,<br/>Taste, Feel,<br/>Smell</p>        | <b>WHAT?</b>     | <p>People walk in,<br/>take things in<br/>with their senses<br/>↑↑↑</p>  |
| <b>R</b> | <b>Reflective</b>   | <p>HEART<br/>Emotions,<br/>Memories,<br/>Associations</p>      | <b>GUT</b>       | <p>Begin to sense, like,<br/>don't like, emotions<br/>&amp; feelings stir,<br/>Associations are<br/>made, memories<br/>rise to the surface</p> |
| <b>I</b> | <b>Interpretive</b> | <p>HEAD<br/>Meaning,<br/>Value,<br/>Significance</p>           | <b>SO WHAT?</b>  | <p>Make conscious<br/>connections, thoughts<br/>arise, words, ideas<br/>form, understanding,<br/>we think about what's<br/>going on 😊</p>      |
| <b>D</b> | <b>Decisional</b>   | <p>ACTION<br/>Resolution,<br/>Opinion,<br/>Do Something</p>  | <b>NOW WHAT?</b> | <p>Consider actions,<br/>decisions, choices,<br/>what to do, how to<br/>respond, how to<br/>relate.</p> <p>My action now will be???</p>        |

(Adapted from wall chart created by Lora Rasey during 4/18/2012 professional development session at



## Appendix G

One section of 17 pages

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Timestamp

|                    |   |  |   |   |   |  |   |   |   |  |  |  |  |  |  |  |  |  |  |  |
|--------------------|---|--|---|---|---|--|---|---|---|--|--|--|--|--|--|--|--|--|--|--|
|                    | A | B  | C   | D   | E   | F  | G   | H   | I   | J  | K  | L  | M  | N  | O  | P  | Q  | R  | S  | T  |
|                    |   | Answer the following question to the best of your ability. You will not be penalized for not answering a question and you may refuse to participate if you decide to not participate in this study. It will not result in any penalty. You can skip any questions that you do not wish to answer. Additionally, you will not be penalized for not participating in this study. | Did you attend any "Friday" sessions currently, during the 6th grade? | Where do you use your laptop? (If you use it at home, please specify the room.) | Using a laptop, have you become a better student? | What concepts have you learned about the use of technology in education? | What are the computer programs you use at home? | What are the computer programs you use at school? | What are the computer programs you use at work? | Are there any computer programs that you have used during 6th grade, but not during 7th grade? | Are there any computer programs that you have used during 6th grade, but not during 7th grade? | Are there any computer programs that you have used during 6th grade, but not during 7th grade? | Are there any computer programs that you have used during 6th grade, but not during 7th grade? | Are there any computer programs that you have used during 6th grade, but not during 7th grade? | Are there any computer programs that you have used during 6th grade, but not during 7th grade? | Are there any computer programs that you have used during 6th grade, but not during 7th grade? | Are there any computer programs that you have used during 6th grade, but not during 7th grade? | Are there any computer programs that you have used during 6th grade, but not during 7th grade? | Are there any computer programs that you have used during 6th grade, but not during 7th grade? | Are there any computer programs that you have used during 6th grade, but not during 7th grade? |
| 4/13/2012 11:58:33 |   | 7th grade  | no  | girl  | 2   | 1  |   |   |   |  |  |  |  |  |  |  |  |  |  |  |
| 4/13/2012 11:59:32 |   | 7th grade  |   |   |   |  |   |   | Edmodo  | MyYearbook   |  |  |  |  |  |  |  |  |  |  |
| 4/13/2012 11:59:51 |   | 7th grade  |   |   |   |  |   |   |   |  |  |  |  |  |  |  |  |  |  |  |
| 4/13/2012 12:00:49 |   | 7th grade  | yes   | girl  | 3   | 4  | none  |   | edmodo.co                                       | games  | none   | no   |  |  |  |  |  |  |  |  |
| 4/13/2012 12:01:03 |   | 7th grade  | yes   | boy   | 5   |  |   |   | i cant answer                                   | games and video  | i cant answer  | i cant answer  |  |  |  |  |  |  |  |  |



## Appendix H

**Question one:** What do you like the most about having a laptop to use in school?

7-1: Being able to listen to music when doing work.

7-2: I'm able to use it at home and I can get stuff done faster. No handwriting.

7-3: Most of my homework is on the computer which is nice to have it all together.

7-4: Not having to worry about getting a laptop from the cart.

7-5: We don't waste paper and it's kind of easier to bring your computer home than a bunch of books.

8-1: Being able to play games on them and being able to get stuff done faster and emailing stuff to the teacher.

8-2: It gives a new thing to learn to work with for when we get older and it also helps us for when we get a job.

8-3: We can work and also have some free time on our computer. Also, teachers let us go onto our computers when we are done with work.

8-4: You are able to do homework fast and you can study a whole lot easier and you have like, all the information you need to do projects or something.

8-5: I like getting to use them during class because it helps us get more resources.

**Question two:** How have laptops helped you become a better student?

7-1: They help me get my work in on time 'cause I can check the homework sheet.

*Question two continued*

7-2: You don't have to wait for a computer cart to be available for a report or stuff like that.

7-3: The Gizmos have helped me understand science a lot more.

7-4: I get to use PowerPoint and other presentation websites.

7-5: I guess it has helped me learn to maybe type faster.

8-1: It has helped me be a better student by being better organized.

8-2: Power school so we can check our grades and our emails to talk and get assignments from our teachers.

8-3: They help me with assignments. I get even more knowledge by looking up whatever my assignment is about.

8-4: We have more online support instead of getting the laptops only on very special occasions. We have them whenever we want to get on, instead of wasting time at our lockers getting text books and being late to class. Most of our books are online know.

8-5: On my laptop I can check the homework sheet to make sure I have all the homework done.

**Question three:** How are you using your laptop at school?

7-1: PowerPoints. I also wrote a book for language. Oh yeah, and Edmodo.

*Question three continued*

7-2: I create PowerPoint stuff. Word documents, reading books, reading questions. I also write essays and reports.

7-3: I use my email, Microsoft products, gizmos, and the teacher's blogs for the most part.

7-4: We use it for presentations and projects and that's about it.

7-5: Edmodo, email, and searching for information for keyboarding. I also like Wordle and Livebinder.

8-1: I'm using it for almost everything.

8-2: Keyboarding, language arts, reading, social studies, and sometimes science and math.

8-3: email, Edmodo, reading articles, searching for facts on assignments, reading books, and yes, sometimes games when I ask.

8-4: Sometimes, but not often, I get to play games. I also do school subjects and an occasional Skyping or Messaging.

8-5: We do many different things for classes with our laptops.

**Question four:** If you could go back in time, what would you have done differently to become more prepared to use a laptop computer in school?

7-1: Nothing

7-2: I don't know

*Question four continued*

7-3: I have no clue

7-4: Nothing, really.

7-5: I was pretty prepared for the beginning of the year.

8-1: I would have participated in the Computer Friday things.

8-2: I don't know.

8-3: Learn more about the sites we use. Other than that everything went fine.

8-4: I would have tried to get myself more familiar with Word and PowerPoint and things like that.

8-5: I would have took the computer classes that you gave and could have been better.

**Question five:** Any additional thoughts?

7-1: nope

7-2: Are we done?

7-3: No.

7-4: Is this going to be used here?

7-5: Nope. I'm good.

8-1: This was fun.

8-2: Next year we get new laptops at the High School.

8-3: No. I've got nuthin'

8-4: No.

8-5: I have really liked having computers this year.

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